

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 6

REMARKS

Claims 1 through 11 and 14 through 16 are pending in the application.

Applicant acknowledges with gratitude the Examiner's indication that Claims 5, 6, 8, 9, 11 and 14 through 16 are allowed.

Claim 1 has been amended to reflect that the films of the invention advantageously exhibit a Yellowness Index of less than or equal to 40 for films having a thickness of from 10 to 500 microns. Support for this amendment can be found in the Application as filed, for example on Page 2, lines 13 – 16 and lines 21 - 23.

Claim 1 has also been amended to recite that the films of the invention are advantageously biaxially oriented. Support for this amendment can be found in the Application as filed, for example on Page 9, line 26 through Page 10, line 2.

Applicants respectfully submit that this response does not raise new issues, but merely places the above-referenced application either in condition for allowance, or alternatively, in better form for appeal. Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

Rejection under 35 USC §112, Second Paragraph

Claims 1 through 4, 7 and 10 stand rejected as indefinite due to the term "vacuole-free."

Applicants respectfully submit that the term "vacuole-free" meets the definiteness requirement of 35 USC § 112, when considered. In light of the Application-as-filed, the

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 7

teachings of the prior art, and the interpretation that would be given by one of ordinary skill in the art at the time the invention was made.

The Application-as-filed clearly notes that the recited titanium dioxide "avoids any occurrence of vacuoles within the polymer matrix during film production." (Application-as-filed, Page 5, lines 16 - 17). One skilled in the art would interpret the term "vacuole" to mean an empty cavity or void, as evidenced by the use of the term "vacuole" within United States Patent Nos. 6,641,924; 6,635,340; 6,627,695; 6,551,538; and 6,326,431.

Consequently, the claims as amended on January 13, 2004 would readily provide clear warning to others as to what constitutes infringement of the patent. Applicants respectfully submit that the test for definiteness is whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. MPEP 2173.02. Applicants further respectfully submit a fundamental tenet of patent law is that applicants are their own lexicographers. MPEP 2173.01

Consequently, Applicants respectfully request withdrawal of this rejection.

The Claimed Invention Is Patentable In Light of the Art of Record

Claims 1 through 4, 7 and 10 stand rejected over United States Patent No. 5,935,903 to Goss et al. (US 903) in view United States Patent No. 6,107,390 to Maeda et al. (US 390).

It may be useful to consider the invention as recited in the claims before addressing the merits of the rejection. The claims are directed to white, biaxially oriented films having a thickness of from 10 to 500 μm formed from a crystallizable polyolefin-free thermoplastic polyester polymer which is substantially vacuole-free, at least one titanium dioxide of the rutile type that is oxidatively coated, and at least one optical brightener. The titanium dioxide and the optical brightener are incorporated into

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 8

the claimed films in the form of at least one masterbatch. The claimed films provide a host of benefits, including an advantageous Yellowness Index of less than or equal to 40 for films having a thickness of from 10 to 500 microns.

As noted above, the recited coated, titanium dioxide avoids the occurrence of vacuoles within the polymer matrix during film production. The substantially vacuole-free films of the invention are altogether unexpected in light of conventional wisdom, which teaches that titanium dioxide produces vacuoles within polyester films. (The Examiner's attention is again kindly directed to the primary reference, US 903 at Col. 4, lines 28 – 35, noting titanium dioxide as a vacuole former within polyester film).

In addition to being substantially vacuole-free, the claimed films exhibit an advantageous combination of good optical properties, i.e. a high level of whiteness in combination with the recited low Yellowness index. More specifically, the synergistic action of the recited titanium dioxide, optical brightener and masterbatch technology advantageously produces films exhibiting a Yellowness Index of 40 or less, as recited in the claims as amended.

The films of the invention are suitable for use in a wide variety of applications, including interior decoration, exhibition stands and displays.

The cited references do not teach or suggest the claimed invention.

As noted in Applicants' Amendment of January 13, 2004, US 903 is directed to thermal transfer printing receiver sheets. (Col. 1, lines 4 – 8). US 903 more specifically attempts to reduce printing flaws by incorporating a mixture of voids within thermal transfer printing receiver sheets. US 903 incorporates a void mixture including (a) small voids having a void size ranging from 0.3 to 3.5 microns formed by inorganic filler particles and (b) large voids having a void size ranging from 5 to 21 microns formed by organic filler particles. (Col. 1, lines 47 – 50 and lines 55 – 65). Titanium

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 9

dioxide is expressly noted to be a void forming inorganic filler. (Col. 3, lines 24 – 33; Col. 3, lines 60 - 62 and Col. 4, lines 28 - 35). US 903 emphasizes the importance of voids to the invention by discussing in great detail the methods of their formation; their size, including length, width and depth; suitable void measuring techniques; and ratio of small to large voids. (Col. 3, line 25 – Col. 5, line 65). The necessity of the voids within the films of US 903 is also evidenced by the reference in the specification that a particular void characteristic, i.e. size distribution, is an "important parameter." (Col. 3, lines 46 – 47).

Applicants respectfully submit that US 903 does not teach or suggest the recited substantially vacuole-free biaxially oriented films of the invention, and particularly not the vacuole-free films of the invention that further include titanium dioxide. US 903 actually teaches away from the recited films by emphasizing the importance of vacuoles to its invention and expressly noting titanium oxide as a vacuole former. Consequently, US 903 most certainly does not teach or suggest the recited substantially vacuole-free biaxially oriented films of the invention including both titanium dioxide and optical brightener and exhibiting a Yellowness Index of less than 40, as correctly noted by the Examiner in Paragraph 6 of the outstanding Office Action.

Accordingly, Applicants respectfully submit that the claimed invention is patentable in light of US 903, considered either alone or in combination with the art.

The secondary reference does not cure the deficiencies within the primary reference.

US 390 is generally directed to coating compositions (and films therefrom) that are used to coat photographic paper. (Col. 1, lines 15 – 21; Col. 2, lines 22 – 28; Col. 2, lines 55 – 60 and Col. 5, lines 15 - 18). As correctly noted by the Examiner, US 390 is more particularly directed to titanium dioxide mixtures with improved dispersion within thermoplastic coatings. (Col. 1, lines 39 – 57). The titanium dioxide mixtures include

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 10

organopolysiloxane and metallic soap. (Col. 2, lines 31 – 38 and Col. 3, line 26 – Col. 4, line 58). US 390 expressly notes that the titanium dioxide may be either anatase-type or rutile-type. (Col. 2, lines 63 – 64). Although providing a laundry list of suitable thermoplastic resins, US 390 is primarily directed to polyolefin-based coating compositions. (Col. 5, lines 15 – 25 and working examples at Col. 6, line 35 – Col. 8, line 33). Polyolefins are noted as preferred because they result in "a coating having good film characteristics." (Col. 5, lines 23 – 25).

Applicants respectfully submit that US 390 likewise does not teach or suggest the recited substantially vacuole-free biaxially oriented polyester films of the invention, and particularly not the vacuole-free biaxially oriented films of the invention that further include rutile titanium dioxide. Nor does US 390 teach or suggest such films further including an optical brightener. In fact US 390 teaches away from optical brighteners as additives by instead recommending a metallic soap in conjunction with titanium dioxide. And US 390 most certainly does not teach or suggest biaxially oriented films including both titanium dioxide and optical brightener that further exhibit a Yellowness Index of less than 40, as noted by the Examiner in Paragraph 7 of the Outstanding Office Action.

Consequently, Applicants respectfully submit that the claimed invention is patentable in light of US 390, considered either alone or in combination with the art of record.

There would have been no motivation to have combined US 903 and US 390. US 903 is directed to thermal transfer printing sheets. US 390 is directed to coated photographic substrates. The present invention is primarily directed to films used in interior decoration, exhibition stands and displays. Consequently, in contrast to the opinion urged within the Office Action, each of these references is in an altogether different field of endeavour. The references further address altogether different issues. US 903 is directed to the elimination of printing flaws. US 390 is directed to improving

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 11

the dispersability of a pigment within coatings. Neither of these references teaches or suggests improving the yellowness of biaxially oriented films by incorporating masterbatched titanium dioxide and optical brightener.

Applicants respectfully reiterate that merely because the references can be combined is not enough, there must still be a suggestion. MPEP 2143.01 (section citing Mills).

However, even if combined (which Applicants submit should not be done), the claimed invention would not result. US 903 is directed to voided thermal transfer printing receiver sheets that contain a mixture of various sized vacuoles. US 390 is directed to filled coatings. Consequently, even if combined, the recited substantially vacuole-free biaxially oriented polyester films incorporating rutile type titanium dioxide and optical brightener that further exhibit a Yellowness Index of less than 40 would not result. In fact, the formation of such substantially vacuole-free films would render the primary reference, US 903, altogether unsatisfactory for its intended purpose. MPEP 2143.01

Accordingly, Applicants respectfully submit that Claims 1 through 11 and 14 through 16 are patentable in light of US 903 and US 390, considered either alone or in combination.

The Office Action cites United States Patent No. 4,145,480 to Kusama et al. (US 480) as pertinent, but not relied upon. Out of an abundance of caution, Applicants respectfully note that the claimed invention is likewise patentable in light of US 480, considered either alone or in combination with the remaining art of record.

Statement in Conformance with 37 CFR 3.73(b)

As noted above, a Power of Attorney, appointing Cathy R. Moore as a Practitioner of Record for Mitsubishi Polyester Film, GmbH, is attached. The above-

Application No.: 09/769,619
Filing Date: January 23, 2001
Page: 12

referenced application has been assigned in its entirety to Mitsubishi Polyester Film, GmbH at Reel/Frame 011513/0840. Copies of the assignment will be forwarded upon request. Accordingly, Cathy R. Moore is authorized to act on behalf of Mitsubishi Polyester Film, GmbH in the above-referenced application.

Conclusion

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1 through 11 and 14 through 16 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional fees are necessary to allow consideration of this paper, the fees are hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

Cathy Moore

Cathy R. Moore
Reg. No. 45,764

ProPat, L.L.C.
425-C South Sharon Amity Road
Charlotte, NC 28211-2841
Telephone: (704) 365-4881
Fax: (704) 365-4851

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office at facsimile number (703) 872-9306 on July 28, 2004.

Claire Wygand
Claire Wygand